Paper No. 19

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Ex parte CHRISTINA K. LIU, JUDITH A. GOLDSTEIN, and YUNG D. NGUYEN

Appeal No. 1999-0003
Application No. 08/642,742

ON BRIEF

Before KRASS, LALL, and BARRY, Administrative Patent Judges.
BARRY, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134 from the rejection of claims 1, 3, 5-8, 10, 12-15, 17, 19-22, 24, and 26-29. We reverse.

BACKGROUND

The invention at issue in this appeal relates to processing video data, i.e., data representing still images or successive images representing motion video. Different video

formats are used to represent images in computer-based image processing systems. Often, all the various elements or nodes of a network of interconnected computers operate in a compatible video format such as the H.261 video standard.

Incompatible video formats, however, are sometimes used in the same network. The appellants' invention aims to provide compatibility therebetween. For each high-level video format, video data at the bitmap level may be encoded in its particular high-level video encoding format. Similarly, encoded video data may be decoded in the applicable video format to provide bitmap video data for display. To convert data encoded in one video format into data encoded in another video format, the encoded video data are decoded to an interim-level format between the encoded level and the bitmap level and common to both video formats. For example, the interim-level format may be subsampled YUV-formatted video data. The interim-level video data are then encoded in the second video format.

Claims 1, which is representative for present purposes, follows:

> 1. A method for processing video data, the method comprising the steps of:
>
> (a) providing data encoded in a first high level encoding format that lies hierarchically above a low level format;
>
> (b) partially decoding the data to provide data encoded in an interim level encoding format that lies hierarchically above the low level format and hierarchically below both the first high level encoding format and a second high level format, wherein the second high level format lies hierarchically above the low level format and is different from the first high level encoding format; and
>
> (c) encoding the partially decoded data in accordance with the second high level encoding format.

The prior art applied in rejecting the claims follows:

Loizides et al. (Loizides)	3,603,937	Sep. 7, 1971
Naimpally	5,589,993 (filed Nov. 14, 1994)	Dec. 31, 1996
Ackland et al. (Ackland)	5,220,325	June 15, 1993.

Claims 1, 3, 5, 8, 10, 12, 15, 17, 19, 22, 24, 26, and 29 stand rejected under 35 U.S.C. § 103(a) as being obvious over Loizides in view of Naimpally. Claims 6, 7, 13, 14, 20, 21, 27, and 28 stand rejected under § 103(a) as being obvious over Loizides in view of Naimpally further in view of Ackland. Rather than reiterate the arguments of the appellants or examiner in toto, we refer the reader to the brief and answer for the respective details thereof.

OPINION

After considering the record, we are persuaded that the examiner erred in rejecting claims 1, 3, 5-8, 10, 12-15, 17, 19-22, 24, and 26-29. Accordingly, we reverse. We begin by considering the examiner's rejection and the appellants' argument.

The examiner asserts, "figure 9 in Loizides shows the index levels comprising high and lowest compressed levels, each level contains compressed keys which are defined as

groups of characters, or bits, usually forming a field in data items ...." (Examiner's Answer at 3-4.) The appellants argue, "Loizides simply does not teach or even suggest the hierarchical level encoding formats ...." (Appeal Br. at 3.)

Claims 1, 3, and 5-7 specify in pertinent part the following limitations: "[a] method for processing video data, the method comprising the steps of: (a) providing data encoded in a first high level encoding format that lies hierarchically above a low level format; (b) partially decoding the data to provide data encoded in an interim level encoding format that lies hierarchically above the low level format and hierarchically below both the first high level encoding format and a second high level format, wherein the second high level format lies hierarchically above the low level format and is different from the first high level encoding format ...." Similarly, claims 8, 10, and 12-14 specify, in pertinent part, the following limitations: "[a]n apparatus for processing video data, the apparatus comprising: (a) means for providing data encoded in a first high level encoding format that lies hierarchically above a low level format; (b) means for

partially decoding the data to provide data encoded in an interim level encoding format that lies hierarchically above the low level format and hierarchically below both the first high level encoding format and a second high level format, wherein the second high level format lies hierarchically above the low level format and is different from the first high level encoding format ....” Also, similarly, claims 15, 17, and 19-21 specify, in pertinent part, the following limitations: “[a] storage medium having stored thereon a plurality of instructions for processing video data, wherein the plurality of instructions, when executed by a processor, cause the processor to perform the steps of (a) providing data encoded in a first high level encoding format that lies hierarchically above a low level format; (b) partially decoding the data to provide data encoded in an interim level encoding format that lies hierarchically above the low level format and hierarchically below both the first high level encoding format and a second high level format, wherein the second high level format lies hierarchically above the low level format and is different from the first high level encoding format ....” Further, similarly, claims 22, 24, and

26-29 specify, in pertinent part, the following limitations: "[a]n apparatus for processing video data, comprising: (a) a first format partial decoder; and (b) a second format partial encoder; wherein: the first format partial decoder partially decodes data encoded in a first high level encoding format to provide data encoded in an interim level encoding format that lies hierarchically above a low level format and hierarchically below both the first high level encoding format and a second high level format, wherein the second high level is different from the first high level encoding format ...." Accordingly, claims 1, 3, 5-8, 10, 12-15, 17, 19-22, 24, and 26-29 require a three-level hierarchy of formats for encoding video data.

The examiner fails to show a teaching or suggestion of the limitations in the applied prior art. "'A prima facie case of obviousness is established when the teachings from the prior art itself would appear to have suggested the claimed subject matter to a person of ordinary skill in the art.'" In re Rijckaert, 9 F.3d 1531, 1532, 28 USPQ2d 1955, 1956 (Fed.

Cir. 1993) (quoting In re Bell, 991 F.2d 781, 782, 26 USPQ2d 1529, 1531 (Fed. Cir. 1993)).

Here, Loizides teaches "[a] method and means for generating a multilevel compressed index." Abs., ll. 1-2. "The multilevel index includes a compressed low-level index L1, and compressed high-level indexes L2, L3, and L4." Col. 5, ll. 62-64. Although the reference's index includes multiple compressed levels, the levels are not formats for encoding video data as claimed. To the contrary, the index is used "for locating information in a machine-readable file, data set, or data base." Col. 3, ll. 7-9. Levels L1-L4 of the index, moreover, "are used to retrieve information from data level (L0)." Col. 5, ll. 61-62.

Relying on Naimpally to "teach[] decoder 310 for partially decoding the encoded data to provide the recovered luminance and chrominance components YUV[,]" (Examiner's Answer at 4), and Ackland to disclose data encoded "not in form suitable for displaying[,]" (Final Rejection at 5), and "RGB format and YUV format[,]" (id.), the examiner fails to

allege, let alone show, that the additional references cure the deficiency of Loizides. Because the latter reference's index is used to locate and retrieve data in a machine-readable file, data set, or data base, we are not persuaded that the teachings from the applied prior art would have suggested the limitations of "[a] method for processing video data, the method comprising the steps of: (a) providing data encoded in a first high level encoding format that lies hierarchically above a low level format; (b) partially decoding the data to provide data encoded in an interim level encoding format that lies hierarchically above the low level format and hierarchically below both the first high level encoding format and a second high level format, wherein the second high level format lies hierarchically above the low level format and is different from the first high level encoding format[;]" "[a]n apparatus for processing video data, the apparatus comprising: (a) means for providing data encoded in a first high level encoding format that lies hierarchically above a low level format; (b) means for partially decoding the data to provide data encoded in an interim level encoding format that lies hierarchically above the low level format and

hierarchically below both the first high level encoding format and a second high level format, wherein the second high level format lies hierarchically above the low level format and is different from the first high level encoding format[;]" "[a] storage medium having stored thereon a plurality of instructions for processing video data, wherein the plurality of instructions, when executed by a processor, cause the processor to perform the steps of (a) providing data encoded in a first high level encoding format that lies hierarchically above a low level format; (b) partially decoding the data to provide data encoded in an interim level encoding format that lies hierarchically above the low level format and hierarchically below both the first high level encoding format and a second high level format, wherein the second high level format lies hierarchically above the low level format and is different from the first high level encoding format[; and]" "[a]n apparatus for processing video data, comprising: (a) a first format partial decoder; and (b) a second format partial encoder; wherein: the first format partial decoder partially decodes data encoded in a first high level encoding format to provide data encoded in an interim level encoding format that

lies hierarchically above a low level format and hierarchically below both the first high level encoding format and a second high level format, wherein the second high level is different from the first high level encoding format ....”

Therefore, we reverse the rejection of claims 1, 3, 5, 8, 10, 12, 15, 17, 19, 22, 24, 26, and 29 as being obvious over Loizides in view of Naimpally and the rejection of claims 6, 7, 13, 14, 20, 21, 27, and 28 as being obvious over Loizides in view of Naimpally further in view of Ackland.

CONCLUSION

In summary, the rejection of claims 1, 3, 5-8, 10, 12-15, 17, 19-22, 24, and 26-29 under § 103(a) is reversed.

REVERSED

ERROL A. KRASS Administrative Patent Judge	)
PARSHOTAM S. LALL Administrative Patent Judge	) BOARD OF PATENT) APPEALS) AND) INTERFERENCES
LANCE LEONARD BARRY Administrative Patent Judge	)

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Once signed, forward to Team 3 for mailing.

APPEAL NO. 1999-0003 - JUDGE BARRY
APPLICATION NO. 08/642,742

APJ BARRY - **2 copies**

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APJ LALL

Prepared By: APJ BARRY

DRAFT SUBMITTED: 24 Jun 02

FINAL TYPED:

Team 3:

I typed all of this opinion.

Please check spelling, cites, and quotes.

Do NOT change matters of form or style.

For any additional reference provided, please prepare PTO 892 and include copy of references